

AMENDMENTS TO THE CLAIMS

1. (Previously presented) An information recording medium comprising:

a substrate having a microscopic pattern, having a continuous shape of approximately parallel grooves formed with alternating groove and land sections;

a recording layer formed on the microscopic pattern;

a light transmission layer formed on the recording layer,

wherein the microscopic pattern is formed so as to satisfy a relation of $P < \lambda/NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of an objective lens; and

wherein the land section is wobbled in the radial direction and having a wobbled shape corresponding to a signal to be recorded on the land section resulting from the modulation of a phase modulated wave that is further modulated by a single frequency wave, the single frequency wave having a frequency of integral multiples or one over integral multiples of a frequency of the phase modulated wave, and

wherein the frequency of the single frequency wave is different from that of the phase modulated wave.

2. (Previously Presented) The information recording medium in accordance with claim 1, wherein a record based on at least one of reflectivity difference and phase difference is performed onto either one of the groove and land sections.

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Previously presented) A reproducing apparatus comprising:

a recording medium having

(a) a substrate having a microscopic pattern, having a continuous shape of approximately parallel grooves formed with alternating groove and land sections;

(b) a recording layer formed on the microscopic pattern;

(c) a light transmission layer formed on the recording layer;

wherein the microscopic pattern is formed so as to satisfy a relation of $P < \lambda/NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, and wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of an objective lens; and

wherein the land section is wobbled in the radial direction and having a wobbled shape corresponding to a signal to be recorded on the land section resulting from the modulation of a phase modulated wave that is further modulated by a single frequency wave, the single frequency wave having a frequency of integral multiples or one over integral multiples of a frequency of the phase modulated wave, and

wherein the frequency of the single frequency wave is different from that of the phase modulated wave;

the reproducing apparatus further including

(d) a pickup composed of a light emitting element having a wavelength of λ within a range of 350 to 450 nm and an objective lens having a numerical aperture of NA within a range of 0.75 to 0.9 for reading out reflected light from the information recording medium;

(e) a motor for rotating the information recording medium;

(f) servo means for controlling the drive of the pickup and the motor;

(g) a turntable for supporting the information recording medium while rotating;

- (h) demodulator means for demodulating an information signal read out by the pickup;
- (i) interface (I/F) means for transmitting a signal demodulated by the demodulator externally; and
- (j) controlling means for controlling the entire reproducing apparatus.

8. (Canceled)

9. (Canceled)

Claims 10 - 15. (Cancelled)

16. (Canceled)